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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,636	07/30/2003	Su-May Yu	08919-088001 13A-910410	4976
26161	7590	10/19/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			BAUM, STUART F	
			ART UNIT	PAPER NUMBER
			1638	

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/630,636

Applicant(s)

YU, SU-MAY

Examiner

Stuart F. Baum

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-20, 22-35, 42, 44 and 47-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18, 20, 23, 29-33, 42, 44 and 47 is/are allowed.
- 6) ☒ Claim(s) 17, 19, 22, 24-28, 34-35, 48-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 8/7/2006 has been entered.
2. Claims 17-20, 22-35, 42, 44, 47-51 are pending.
Claims 1-16, 21, 36-41, 43, 45-46 have been canceled.
Claims 47-51 have been newly added and are drawn to the elected invention.
3. Claims 17-20, 22-35, 42, 44, 47-51 including SEQ ID NO:1 encoding SEQ ID NO:7 are examined in the present office action.
4. Rejections and objections not set forth below are withdrawn.
5. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

Claim Objections

6. Applicant is advised that should claim 42 be found allowable, claim 44 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Written Description

7. Claims 17, 19, 22, 24-28 and 34-35 remain rejected and new claims 48-51 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 4/5/2006. Applicant's arguments filed 8/7/2006 have been fully considered but they are not persuasive.

Applicants contend amended claim 17 now recites that the nucleic acid that hybridizes under stringent conditions to SEQ ID NO:1 also encodes a polypeptide that binds to DNA containing one or more copies of a TATCCA sequence and that this functional limitation is analogous to Example 9, and adequately narrows the claimed genus (page 7 of Remarks, bottom paragraph). Applicants contend the claimed genus would not include the other two MYB proteins disclosed in the specification, i.e., OsMYBS2 and OsMYBS3 of SEQ ID NO:2 and 3, respectively (page 8 of Remarks, top paragraph). Applicants contend OsMYBS1 of SEQ ID NO:1 only shares 72% sequence identity within a 165-base segment out of more than 1000 bases of OsMYBS2, and OsMYBS1 does not share a significant sequence homology with OsMYBS3 (*Ibid*). Applicants contend, without significant sequence homology spanning their entire lengths, two nucleic acid molecule are unlikely to hybridize to each other under stringent conditions. Applicants contend, their claimed genus is directed to nucleic acid molecules comprising at least 500 bases and hybridize to SEQ ID NO:1 under stringent conditions (*Ibid*).

The Office contends Applicants have not fulfilled the written description requirements because Applicants have not demonstrated that they are in possession of the broadly claimed

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genus. Applicants have not disclosed a representative number of polynucleotide sequences falling within the scope of nucleic acid molecules comprising at least 500 bases that encodes a protein that binds to DNA containing one or more copies of TATCCA. Applicants have not disclosed essential regions of a polypeptide encoded by said polynucleotide. Applicants have only disclosed one sequence of SEQ ID NO:1. The Office contends that Applicants have not disclosed relevant identifying characteristics, i.e., complete or partial structure, other physical and/or chemical properties, functional characteristics when coupled with a known or disclosed correlation between function and structure, or some combination of such characteristics that adequately demonstrates Applicants were in possession of the claimed invention. The Office contends that the recited functional limitation is not specific to Applicants' invention as other MYB proteins with different regulatory roles also bind to said TATCCA sequence (See page 6, lines 27-30 of the specification) and therefore, said functional limitation is not analogous to Example 9 of the written description guidelines, and therefore, the written description requirements have not been fulfilled.

Scope of Enablement

8. Claims 17, 19, 22, 24-28 and 34-35 remain rejected and new claims 48-51 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for SEQ ID NO:1 encoding SEQ ID NO:7 wherein SEQ ID NO:7 binds to a sugar response sequence (SRS) and effects transcription of a coding sequence operably linked to the SRS, does not reasonably provide enablement for nucleic acid sequences that comprise a sequence of at least 500 bases and hybridize to SEQ ID NO:1 or the complement thereof under stringent conditions; and plant or

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cell transformation therewith and method comprising said nucleic acid sequence. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. This rejection is maintained for the reasons of record set forth in the Official action mailed 4/5/2006. Applicant's arguments filed 8/7/2006 have been fully considered but they are not persuasive.

Applicants contend that amended claim 17 covers a narrow genus of nucleic acid molecules encoding proteins capable of binding to DNA containing one of more copies of TATCCA (page 9 or Remarks, 3rd full paragraph). Applicants contend, given the small number of sequences encompassed by amended claim 17, and given the teachings in the specification concerning methods of assaying for the required binding activity, undue experimentation is not required by one of skill in the art (*Ibid*).

The Office contends that amended claim 17 covers a broad genus, as discussed above. The Office contends Applicants have not taught how one of skill in the art would identify and isolate any of the multitude of sequences encompassed by Applicants' broad claims. In addition, using the DNA sequence TATCCA, or multiple copies thereof, one of skill in the art would identify a multitude of polypeptides that can bind to said sequence, even though they interact with different biological molecules and have different activities that relate to transcription (See paragraph bridging pages 15 and 16 and page 17, lines 21-19 for example). Therefore, given the multitude of sequences encompassed in Applicants' broad claims and given the lack of guidance and examples; the unpredictability in the art; and the state-of-the-art as discussed in the office

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action mailed 9/12/2005, undue experimentation would be required to practice the broadly claimed invention, and therefore the invention is not enabled.

9. Claims 17-20, 22-35, 42, 44 and 47-51 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest an isolated nucleic acid comprising at least 500 bases, the sequence hybridizing under stringent condition (i.e., hybridization at 65°C, 0.5 X SSC, followed by washing at 45°C, 0.1 X SSC, see page 5, lines 14-15) to SEQ ID NO:1, or wherein the nucleic acid comprises SEQ ID NO:1 encoding SEQ ID NO:7; and method, isolated cell and plant comprising said nucleic acid.

10. Claims 18, 20, 23, 29-33 and 47 are objected to as being dependent upon a rejected or objected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

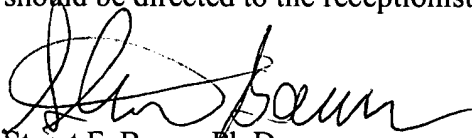
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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

A handwritten signature in black ink, appearing to read 'Stuart F. Baum', is written over a horizontal line.

Stuart F. Baum Ph.D.

Primary Examiner

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October 13, 2006